

Application No.: 10/054,755
Filed: November 12, 2001
Reply to Office Action of July 17, 2006

AMENDMENTS TO THE SPECIFICATION:

Please replace paragraph [0091] with the following rewritten paragraph:

--[0091] As shown in FIG. 5, a space 80 having a given width in a thickness direction of a casing cover 44A is defined at the center portion of the casing cover 44A with the end surface 31a of the rotor 31 by forming a recess on the surface of the casing cover 44A mating with the end surface 31a of the rotor 31. A cover piston 81 is engaged with the peripheral wall defining the space 80 in gas tight fashion for reciprocal motion in the thickness direction, namely toward and away from the end surface 31a of the rotor 31. An air cylinder 82 is mounted on the casing cover 44A in coaxial relationship with the cover piston 81 by mounting bolts 83. The air cylinder 82 is constructed with a cylinder body 82a, a cylinder cover 86 located on the side of the casing cover 44A, a cylinder cover 87 on the opposite side, a piston 88 slidingly reciprocating within the cylinder body 82a, a piston rods 83a and 83b (which will be identified by reference numeral 83 as generally referred to) extending from both sides of the piston 88, and ~~inlet/outlet~~ inlet and outlet ports 91 and 92 communicated with forward drive side and reverse drive side cylinder chambers 89 and 90 defined on both sides of the piston 88. The cylinder cover 86 on the side of the casing cover 44A may be formed to be common with the casing cover 44A. Also, the cylinder cover 86 can be provided separately on the side of the air cylinder 82. In this case, the space 80 of the casing cover 44A is formed through the casing cover 44A. On the other hand, the cylinder cover 86 formed separately on the side of the air cylinder 82 can serve as the casing cover 44A and the cylinder cover 86 and the casing cover can be formed integrally with each other. In this case, the cylinder cover 86 of the air cylinder is mounted directly on the main casing 43 as the casing cover 44A by the bolts.--

Please replace paragraph [0096] with the following rewritten paragraph:

--[0096] With the construction of FIG. 6, upon operating the rotary pump in the normal state, as shown in FIG. 5 or 6, an air is supplied into the forward side cylinder chamber 89 through the inlet port of the air cylinder 82 to actuate the piston 88 in forward direction, i.e. toward left in the drawing. By this, the cover pistons 81 and 81A are placed flush with the inner end surface of the

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casing cover 44A and substantially in contact with the minimum fine gap between the end surface 31a of the rotor 31. It should be noted when the piston 88 is moved toward left in the drawing, air in the left side reverse side cylinder chamber 90 is supplied (charged/discharged) ~~discharged~~ through the outlet port 92.--

Please replace paragraph [0098] with the following rewritten paragraph:

-- [0098] Upon washing the pumping chamber 42 at the end of operation of the pump for a day, a gripping portion of the lock bolt 42 is operated to retract the lock bolt 84 from the tip end surface of the piston rod 83 and also, the air is introduced into the reverse side cylinder chamber 90 under pressure and the air in the cylinder chamber 89 on the opposite side is supplied (charged/discharged) ~~discharged~~ through the outlet port 92, and in conjunction therewith the air in the space 80 defined by the casing cover 44 and the cover piston 81 is discharged through an air discharge opening 103. By this, as shown in FIG. 7 or FIG. 8, the piston 88 is moved toward right in the drawing. By this, the cover pistons 81 and 81A connected to the piston rod 83a are retracted away from the end surface 31a of the rotor 31 to define a large gap 104 between the cover piston 81 and 81A and the end surface of the rotor 31. By feeding the washing water into the pumping chamber 42, large amount of the washing water will flow as shown by arrow and discharged through the discharge port 51. Larger amount and higher flow velocity will result in higher washing effect to effectively improve the washing effect for the pumping chamber 42, particularly the end surface 31a of the rotor 31 and the inner end surface 44a of the casing cover 44 opposed to the end surface 31a.--

Please replace paragraph [0103] with the following rewritten paragraph:

-- [0103] By constantly supplying a given pressure of air through the ~~inlet~~ port 91 of the air cylinder 82, the cover pistons 81 and 81A are placed in opposition to the pumping action position of the end surface 31a of the rotor 31 by the piston 88 biased by the air pressure. When the discharge pressure of the pump is elevated beyond the given pressure to build up a pressure to retract the cover pistons 81 and 81A away from the end surface 31a of the rotor 31 thus overcoming the biasing pressure of the piston 88, the cover piston 81 is retracted from the end

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surface 31a of the rotor 31 to lower pumping function and relieve the discharge pressure. The discharge pressure of the rotary pump can be regulated by this. The discharge pressure can be freely set by the air pressure to be supplied into the air cylinder.--